JOTE Journal of Occupational Therapy Education

Volume 8 | Issue 4 Article 4

2024

Trauma-Informed Pedagogy: The Prevalence of Trauma Among Students in a Master of Science Program in Occupational Therapy

Amelia Wilson

Ruth Chen
McMaster University

Michelle P. Phoenix
CanChild, School of Rehabilitation Science, McMaster University, Ontario, Canada

Sarah Wojkowski
McMaster University

Sandra VanderKaay
McMaster University

Trauma-Informed Pedagogy: The Prevalence of Trauma Among Students in a Master of Science Program in Occupational Therapy

Abstract

Trauma impacts learning at all stages of education and can be particularly problematic at post-secondary levels and for people from equity-deserving groups. Understanding trauma can support effective teaching and learning. Research suggests that students who have experienced trauma may be more likely to enter healthcare professional programs. Research specific to occupational therapy (OT) students who have experienced trauma is limited. The purpose of this study was to explore the prevalence of trauma among Master of Science (MSc) OT students at a Canadian university. The *Childhood Trauma Questionnaire* (CTQ) was selected for data collection. CTQ is a validated retrospective, self-report tool evaluating five sub-scales of trauma. Respondents (N = 85) were year #1 or year #2 students in an MSc OT program. Descriptive statistics were used to analyze data. CTQ assigns minimization/denial scores which identify possible under-reporting of trauma. Varying severity of trauma was identified, with the highest level of trauma reported on the emotional abuse sub-scale (low to moderate classification). Mean trauma score for the remaining four sub-scales fell within the none to minimal trauma classification. Results suggest a low level of trauma among MSc OT students. However, minimization/denial scores suggest possible under-reporting for 28% of respondents. Trauma can interfere with learning and can manifest in a variety of ways. Considering the potential under-reporting of childhood trauma experiences in retrospective measures, implementing trauma-informed pedagogical practices universally could address the needs of identified trauma survivors while supporting all students including those who do not disclose or underreport.

Keywords

Inclusive education, post-secondary education, childhood trauma questionnaire

JOTE
Journal of Occupational Therapy Education

Volume 8, Issue 4

Trauma-Informed Pedagogy: The Prevalence of Trauma Among Students in a Master of Science Program in Occupational Therapy

Amelia Wilson; Ruth Chen, PhD, RN;

Michelle P. Phoenix, SLP, Reg. CASLPO, PhD;

Sarah Wojkowski, PT, PhD; & Sandra VanderKaay, PhD, OT Reg. (Ont.)

McMaster University

Canada

ABSTRACT

Trauma impacts learning at all stages of education and can be particularly problematic at post-secondary levels and for people from equity-deserving groups. Understanding trauma can support effective teaching and learning. Research suggests that students who have experienced trauma may be more likely to enter healthcare professional programs. Research specific to occupational therapy (OT) students who have experienced trauma is limited. The purpose of this study was to explore the prevalence of trauma among Master of Science (MSc) OT students at a Canadian university. The *Childhood Trauma Questionnaire* (CTQ) was selected for data collection. CTQ is a validated retrospective, self-report tool evaluating five sub-scales of trauma. Respondents (*N* = 85) were year #1 or year #2 students in an MSc OT program. Descriptive statistics were used to analyze data. CTQ assigns minimization/denial scores which identify possible under-reporting of trauma. Varying severity of trauma was identified, with the highest level of trauma reported on the emotional abuse sub-scale (low to moderate classification). Mean trauma score for the remaining four sub-scales fell within the none to minimal trauma classification. Results suggest a low level of trauma among MSc OT students. However, minimization/denial scores suggest possible under-reporting for 28% of respondents. Trauma can interfere with learning and can manifest in a variety of ways. Considering the potential under-reporting of childhood trauma experiences in retrospective measures, implementing trauma-informed pedagogical practices universally could address the needs of identified trauma survivors while supporting all students including those who do not disclose or underreport.

Introduction

The experience of trauma can impact learning at all stages of education and can be particularly problematic at the post-secondary level and for people from equity-deserving groups (Barros-Lane et al., 2021; Kostouros, 2010; Sitler, 2009; VanderKaay et al., 2023; Wells et al., 2021). Research indicates that people from equity-deserving groups, including those who are racialized and/or minoritized, two-spirit, lesbian, gay, bisexual, transgender, and queer/questioning (2SLGBTQ+), women, and Indigenous People are disproportionately affected by trauma including systemic and structural violence (Kostouros, 2010; Mooney, 2017; Panofsky et al., 2021; Watt, 2023; Yasmine & Moughalian, 2016). Within post-secondary institutions these equity-seeking groups are already marginalized and at risk for poorer learning experiences and outcomes (Joncas & Pilote, 2021; Taylor et al., 2020; Watt, 2023). The American Psychological Association (APA) defines *trauma* as:

> Any disturbing experience that results in significant fear, helplessness, dissociation, confusion, or other disruptive feelings intense enough to have a long-lasting negative effect on a person's attitudes, behavior, and other aspects of functioning. Traumatic events include those caused by human behavior (e.g., rape, war, industrial accidents) as well as by nature (e.g., earthquakes) and often challenge an individual's view of the world as a just, safe, and predictable place (APA, 2015).

Trauma can take many forms (APA, 2015). Some traumatic experiences are one-time events (e.g., motor vehicle collision) while others are ongoing occurrences (e.g., chronic poverty). Some traumatic experiences can be generational (e.g., legacy of colonialism among generations of Indigenous People) and some can be considered mass trauma (e.g., the COVID-19 pandemic; Anzaldúa, 2022; Gaywsh & Mordoch, 2018; Watt, 2023). Inter-personal violence such as child maltreatment and intimate partner violence is considered one of the most common types of traumas experienced worldwide (Iverson et al., 2013). Systemic and structural violence, including institutional practices and social structures that adversely affect groups or individuals, contribute to both the experience of trauma and its exacerbation (Elliot et al., 2005; Iverson et al., 2013; Yasmine & Moughalian, 2016). Up to 85% of students entering post-secondary education may have experienced trauma (Cantiller, 2021; Davidson, 2017; Frazier et al., 2009). Within post-secondary institutions, trauma manifests uniquely to each individual and can have serious implications on a student learning (Wells et al., 2021). Difficulty focusing, severe anxiety, poor academic performance, helplessness, difficulty recalling and retaining information, and high absenteeism are examples of trauma manifestations in post-secondary classrooms (Anzaldúa, 2022; Barros-Lane et al., 2021; Davidson, 2017; VanderKaay et al., 2023).

Researchers suggest a relationship between an individual's experience of trauma and their education and career choices (Bryce et al., 2023). Specifically, an association may exist between the experience of trauma and the pursuit of health professional programs (Bryce et al., 2023). The archetype of the "wounded healer", first theorized by Jung (1966), suggests individuals with childhood trauma may enter the helping professions with the desire to relieve the suffering of others, in response to the experience of

suffering in their own lives (Newcomb et al., 2015). Research conducted in medicine, nursing, and social work indicates many students enrolled in these pre-clinical health professional programs have experienced significant trauma, possibly more so than in the average population (Clark & Aboueissa, 2021; Hedrick et al., 2021; King et al., 2017; Thomas, 2016). In addition to influencing career choice, childhood trauma can impact students' ability to learn and develop the skills necessary for their future as a health professional (Newcomb et al., 2015). “Wounded healers” may require educational and work-related supports and resources and may ultimately be at a higher risk of vicarious trauma and burnout in professional practice (Newcomb et al., 2015).

Understanding the prevalence of trauma within health professional classrooms can have important implications on teaching methods and learning styles. As previously stated, research regarding the prevalence of trauma has been conducted in cognate health professional disciplines such as medicine, nursing, and social work (Clark & Aboueissa, 2011; Hedrick et al., 2021; King et al., 2017; Thomas, 2016). However, literature investigating the prevalence of trauma specific to students in occupational therapy (OT) programs is limited. In a recent publication in this journal, Wells et al. (2021) surveyed American entry-level OT students to identify and understand the impact of trauma in OT education. Results suggested that childhood trauma had a profound impact on the educational experiences of OT students and highlighted the important role that educators have in supporting students who have experienced trauma. The study by Wells et al. (2021) represents a seminal contribution to the literature in OT education. However, despite the important relevance of this singular and unique research study, the authors outlined several limitations to their research, and to its application to OT education (Wells et al., 2021). First, results were based on a Google survey which was not piloted or tested, calling the tool’s reliability and validity into question. Second, the types of traumatic events experienced were not explored. Finally, although the study by Wells et al. (2021) involved respondents from several entry-level doctoral programs, the geographical location of respondents was primarily the Northeast areas of the United States. The geographical location may have implications for the generalizability of results to understanding different contextual circumstances. The present study builds upon findings by Wells et al. (2021) by utilizing a validated and reliable reporting tool, reporting types of traumas experienced, and considering prevalence in a different context.

The purpose of this study is to contribute to a further understanding of trauma among OT students using the validated *Childhood Trauma Questionnaire* in the Canadian context. The research question guiding this study was: *What is the prevalence and profile of childhood trauma experiences among two cohorts of student OTs enrolled in a MSc OT program (Class of 2023/Class of 2024) at a Canadian university?*

Methods

Study Design and Instrument

Ethics approval was granted by the institutional review board of the university (Project No. 15554). The *Childhood Trauma Questionnaire* (CTQ) was used to evaluate the prevalence of childhood trauma for this cross-sectional study (Bernstein & Fink, 1998;

Hulley et al., 2013). The CTQ is a 28-item retrospective self-report tool. The CTQ was abbreviated in 1997 from a previous 70-item tool (Bernstein & Fink, 1998). The shorter 28-item version was found to possess the same psychometric properties as the earlier 70-item version, so the shorter tool was adopted as the CTQ (Bernstein & Fink, 1998). As a result of the history of tool development, the CTQ is sometimes referred to as the short form, short-form, Short-Form, or SF. However, the current and proper published name of the 28-item tool is *Childhood Trauma Questionnaire (CTQ)* which we have used throughout (Bernstein & Fink, 1998). Example CTQ items can be found in Table 1. Currently the CTQ is available as a print document and not in an online format. For each of the 28 items respondents circle one of five available frequencies (i.e., never true, rarely true, sometimes true, often true, often very true). Scores are then converted to five individual scales: physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect (Bernstein & Fink, 1998). Three questions on the CTQ are part of a minimization/denial scale designed to identify possible under-reporting of maltreatment (false negatives) within participant responses. These questions are also listed in Table 1. The CTQ was selected due to reported invariance, high convergent, and discriminative validity (Bernstein & Fink, 1998; Bernstein et al., 2003). Compared to other tools, the CTQ demonstrates high replicability and internal consistency, serving as one of the leading scales in assessing experiences of trauma (Bernstein et al., 2003; Georgieva et al., 2021). A large body of research suggests childhood trauma experiences have a detrimental impact on lifelong health and wellbeing (Bussières et al., 2023; Herzog & Schmahl, 2018; Papp & Fitzgerald, 2024; Söyünmez & Seki Öz, 2024).

Table 1

Childhood Trauma Questionnaire (CTQ) Example Questions

Scales	Example Statement
Physical Neglect	I didn't have enough to eat. (Q #1)
Emotional Abuse	People in my family called me things like "stupid", "lazy", or "ugly". (Q #3)
Sexual Abuse	Someone tried to touch me in a sexual way or tried to make me touch them. (Q #20)
Physical Abuse	People in my family hit me so hard that it left me with bruises or marks. (Q #11)
Minimization/Denial	There was nothing I wanted to change about my family. (Q #10) I had the perfect childhood. (Q #16) I had the best family in the world. (Q #22)

Note. Example questions taken from CTQ manual (Bernstein & Fink, 1998).

Participants/Recruitment

Participants (*N* = 85) were in their first year or second year of a two-year MSc OT program. All first year and second year MSc OT students were informed of the research study using an email script that was approved by the institutional review board of the university. The email script indicated the purpose of the research and informed students that participation was voluntary. The email script also informed students that two research assistants would arrive at the end of a class (specific class was stated) to administer the survey. The two research assistants were undergraduate students in an unrelated degree program and therefore posed very low risk of being familiar to any of the MSc OT students. The principal investigator remained off-site to ensure that there would be absolutely no potential for students to feel pressure or undue influence to participate.

Data Collection

When the research assistants arrived at the designated classrooms all students were given the opportunity (e.g., verbally and time provided) to leave the classroom. Those students who were willing to complete the survey were invited to remain in the classroom. Data regarding the number of students who left was not tracked to avoid any undue influence, manipulation, or perceived coercion to participate. Students were reminded that participation was voluntary, and that no demographic or personal information was to be collected (i.e., survey was completely anonymous). The institutional review board did not require written consent in order to maintain complete anonymity of survey respondents. Instead, remaining in the classroom to complete the survey served as implied consent. Upon completion, the CTQ was collected and was confidentially stored in locked cabinets in a secure location for data analysis.

Data Analysis

Descriptive statistics were used to analyze data. The CTQ manual provided trauma thresholds to classify trauma scores in terms of severity: none, low, moderate, and severe (Bernstein & Fink, 1998). The lowest categorical cut scores were selected as per the CTQ manual to maximize chances of detecting trauma (Bernstein & Fink, 1998). Categorical mean, median, interquartile range, and standard deviation were calculated for each trauma sub-scale.

Quality

The CTQ is an extensively researched and widely used tool with strong rigor (Baker & Maiorino, 2010; Georgieva et al., 2021; Saini et al., 2019). As a faculty member in the MSc OT program, the principal investigator was off-site during survey administration to limit undue influence (Government of Canada, 2023).

Results

A combined total of 121 students were enrolled in the Class of 2023 (N = 58) and Class of 2024 (N = 63). As previously mentioned, data regarding the number of students in attendance on the day of survey administration or the specific number of students that left the classroom was not collected to avoid undue influence, manipulation, or

perceived coercion to participate. Of the 89 total respondents, four CTQs had missing data (i.e., respondent did not circle a response for a number of the 28 questions). Data for these four respondents represented <5% of data collected. Therefore, a decision was made to exclude these four participants from analysis (Mirzaei et al., 2022). Participant responses for each subscale were categorized on severity of trauma as per the CTQ manual (Bernstein & Fink, 1998): none, low, moderate, or severe. Findings are summarized in Table 2.

Table 2

Childhood Trauma Questionnaire (CTQ) Descriptive Statistics

Trauma Scale	*M*	*Mdn*	*Range*	*SD*
Emotional Abuse	8.55	7	5-19	3.67
Physical Abuse	5.85	5	5-18	2.40
Sexual Abuse	5.32	5	5-14	1.33
Emotional Neglect	8.31	7	5-22	3.65
Physical Neglect	6	5	5-12	1.47

Emotional Abuse Scale

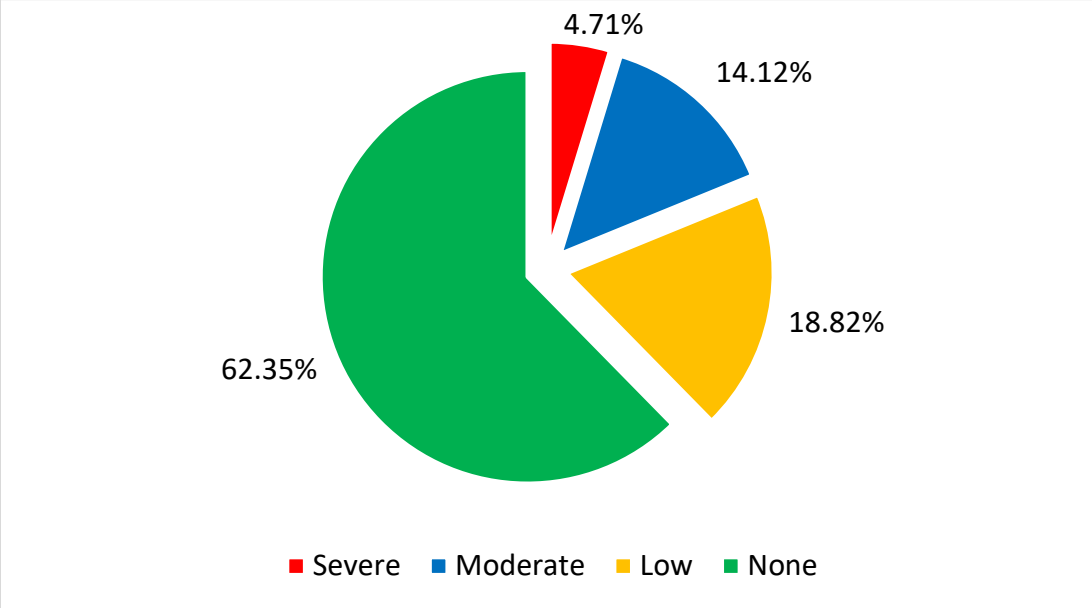
Of the 85 respondents, 4.71% (*n* = 4) were categorized as severe, 14.12% (*n* = 12) as moderate, 18.82% (*n* = 16) as low, and the remaining 62.35% (*n* = 53) as none or minimal trauma (see Figure 1). The average trauma score for emotional abuse was 8.55 (*SD* = 3.67), falling in the low to moderate classification of severity.

Physical Abuse Scale

Of the 85 respondents, 3.53% (*n* = 3) were categorized as severe, 1.18% (*n* = 1) as moderate, 4.71% (*n* = 4) as low, and the remaining 90.59% (*n* = 77) as none or minimal trauma (see Figure 2). The average trauma score for physical abuse was 5.85 (*SD* = 2.40), falling in the none or minimal classification of severity.

Figure 1

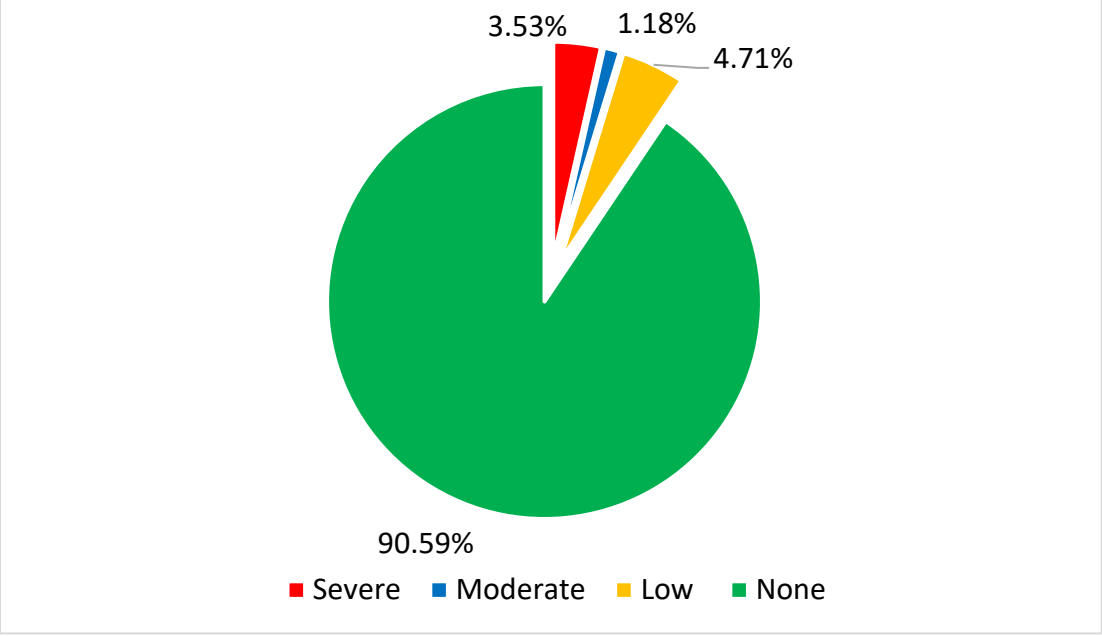
Childhood Trauma Questionnaire (CTQ) Emotional Abuse Scale Findings for Students in a MSc OT Program.



Note. *N* = 85. Thresholds for severity of trauma determined by CTQ manual (Bernstein & Fink, 1998).

Figure 2

Childhood Trauma Questionnaire (CTQ) Physical Abuse Scale Findings for Students in a MSc OT Program



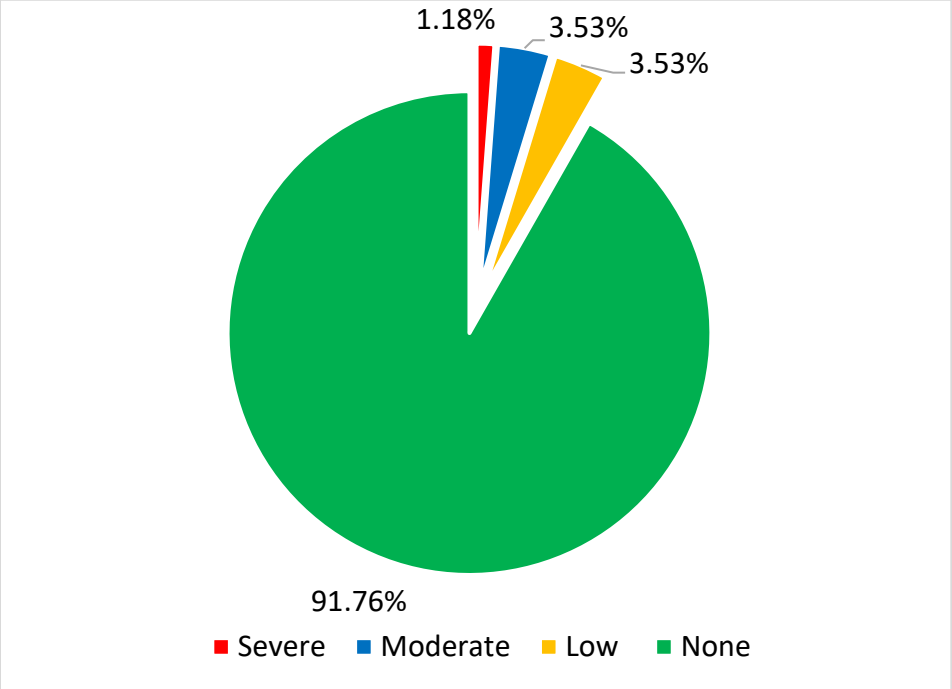
Note. *N* = 85. Thresholds for severity of trauma determined by CTQ manual (Bernstein & Fink, 1998).

Sexual Abuse Scale

Of the 85 respondents, 1.18% (*n* = 1) categorized as severe, 3.53% (*n* = 3) as moderate, 3.53% (*n* = 3) as low, and the remaining 91.76% (*n* = 78) as none or minimal trauma (see Figure 3). The average trauma score for sexual abuse was 5.32 (*SD* = 1.33), falling in the none or minimal classification of severity.

Figure 3

Childhood Trauma Questionnaire (CTQ) Sexual Abuse Scale Findings for Students in a MSc OT Program



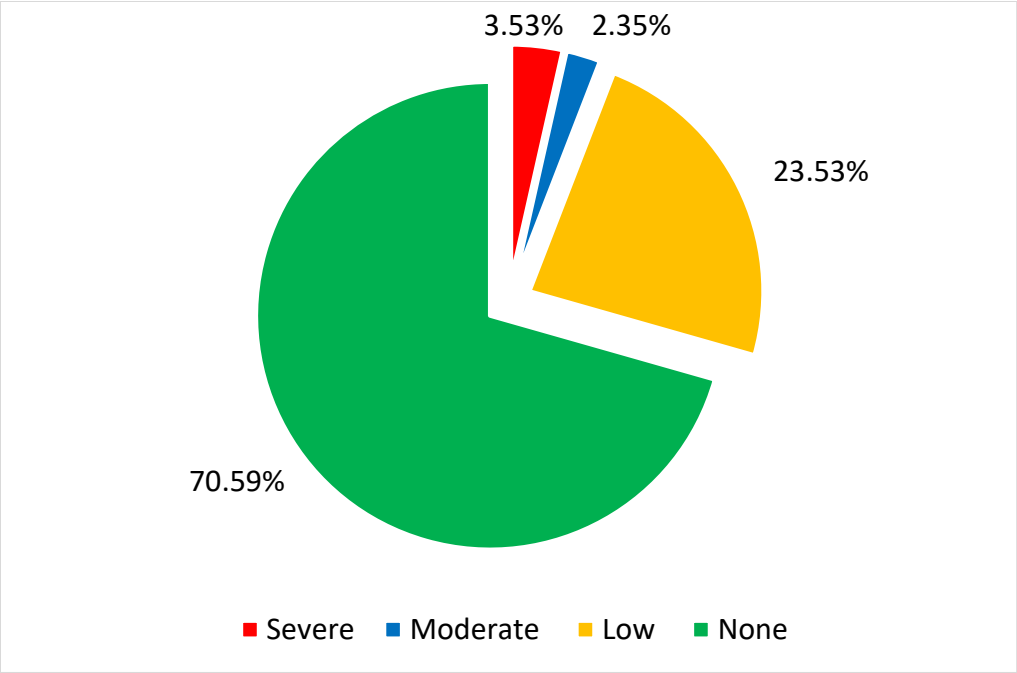
Note. *N* = 85. Thresholds for severity of trauma determined by CTQ manual (Bernstein & Fink, 1998).

Emotional Neglect Scale

Of the 85 respondents, 3.53% (*n* = 3) categorized as severe, 2.35% (*n* = 2) as moderate, 23.53% (*n* = 20) as low, and the remaining 70.59% (*n* = 60) as none or minimal trauma (see Figure 4). The average trauma score for emotional neglect was 8.31 (*SD* = 3.65), falling in the none or minimal classification of severity.

Figure 4

Childhood Trauma Questionnaire (CTQ) Emotional Neglect Scale Findings for Students in a MSc OT Program



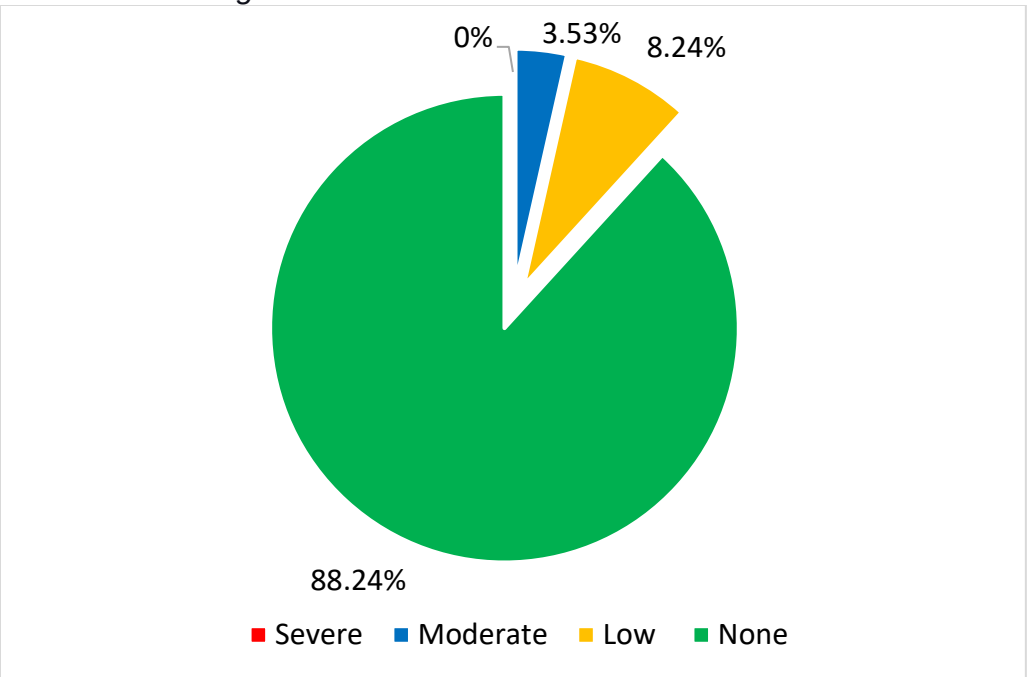
Note. *N* = 85. Thresholds for severity of trauma determined by CTQ manual (Bernstein & Fink, 1998).

Physical Neglect Scale

Of the 85 respondents, 3.53% (*n* = 3) categorized as moderate, 8.24% (*n* = 7) as low, and the remaining 88.24% (*n* = 75) as none or minimal trauma (see Figure 5). The average trauma score for physical neglect was 6.0 (*SD* = 1.47), falling in the none or minimal classification of severity.

Figure 5

Childhood Trauma Questionnaire (CTQ) Physical Neglect Scale Findings for Students in a MSc OT Program



Note. *N* = 85. Thresholds for severity of trauma determined by CTQ manual (Bernstein & Fink, 1998).

Minimization/Denial Scores

For each of the three questions on the CTQ that were intended to identify potential minimization or denial of childhood trauma a score of one was assigned when the respondent circled “very often true” (i.e., 5), and a score of zero was assigned when the responded selected “never true” to “often true” (i.e., 1 to 4). Therefore, the minimization/denial score can be between zero and three where an individual summative score of 1-3 suggests possible under-reporting. Of the 85 respondents, 72.73% (*n* = 64) received a score of zero, 12.94% (*n* = 11) received a score of one, 11.76% (*n* = 10) received a score of two, while the remaining 3.53% (*n* = 3) received the highest score of three. This suggests approximately 28% of responses received an individual summative score of 1-3 and may be under-reporting true experiences of trauma (see Table 3; Bernstein & Fink, 1998).

Table 3

Childhood Trauma Questionnaire (CTQ) Minimization/Denial Scores

Minimization/Denial Score	*n*	%
0	64	72.73
1	11	12.94
2	10	11.76
3	3	3.53

Discussion and Implications for Occupational Therapy Education

This study builds on Wells et al.'s work (2021), investigating the scope of experienced trauma among MSc OT students. Our study extends knowledge by utilizing a standardized assessment tool (CTQ), reporting types of traumas experienced, and including OT students in a Canadian context. Participants (N = 85) were in their first year or second year of a two-year MSc OT program. The results of this study demonstrate varying severity of trauma depending on classification subscales. The highest level of trauma was reported on the emotional abuse subscale which was the only score to fall into the low to moderate classification of severity. The mean trauma score for the remaining four categories fell within the none or minimal classification of severity. Of note was the minimization/denial score which indicated that 28% of responses may be representative of an under-reporting of trauma. Research suggests that childhood trauma experiences tend to be under-reported when using retrospective measures (Church et al., 2017). This is due in part to self-reporting biases (e.g., social desirability and recall bias) introduced in retrospective measurements when compared to other measures (e.g., health worker notes, or sibling interviews; Church et al., 2017). Considering the retrospective nature of the CTQ alongside the minimization/denial scores, the presented data may not be fully representative of the trauma experienced by participants.

Trauma can interfere with learning and can manifest in a variety of ways in the post-secondary classroom including difficulty focusing, severe anxiety, poor academic performance, helplessness, difficulty recalling and retaining information, and high absenteeism (Anzaldúa, 2022; Barros-Lane et al., 2021; Davidson, 2017; VanderKaay et al., 2023). Although results generally suggest a low level of trauma experienced among the MSc OT students who responded to the survey, it is important to note that: (a) some students in each category scored in the severe and moderate range, (b) a strong potential for under-reporting of trauma experiences was indicated, and (c) all MSc OT students would have experienced the COVID-19 pandemic thereby increasing the likelihood of the experience of mass trauma. As a result, consistent with findings from Wells et al. (2021) trauma-informed pedagogical practices are recommended in

OT education. Trauma-informed pedagogy is defined as a way to approach teaching and learning that considers how trauma impacts learners and seeks to mitigate the effects of trauma on learning by creating safe, supportive, and empowering learning spaces that minimize re-traumatization and promote success and resilience (VanderKaay et al., 2023). An integrative review of literature (*N = 55;* Toronto & Remington, 2020) previously conducted by the principal investigator identified pedagogical practices that could be implemented to mitigate the effects of trauma on learning at the level of the individual instructor/interactions with students, academic/pedagogical level, and systems/policy/school-wide level (VanderKaay et al., 2023). Some examples of trauma-informed pedagogical practices identified include reaching out to check on students who seem to be struggling in or consistently absent from the course (instructor/interactions), paying close attention to student reactions to content (academic/pedagogical) and potentially reaching out (as stated above), or providing a space to which students can retreat as needed (systems/policy/school-wide). As part of the integrative review conducted by VanderKaay et al. (2023) over 25 pages of pedagogical practices were identified and collated for dissemination and are freely available at www.doitanyway.ca. Implementing trauma-informed pedagogical practices can contribute to cultivating safe and equitable learning spaces that support a range of needs, ultimately mitigating the effects of trauma on learning, advancing accessibility and inclusivity, and leading to better academic learning outcomes (Barros-Lane et al., 2021; Davidson, 2017; Sitler, 2009).

Findings from this study are distinct from those of Wells et al. (2021) in that the current study explored types of traumas reported by OT students. There may be several benefits to understanding the types of traumas experienced. First, different types of trauma-informed pedagogical practices can be selected depending on the type of traumas experienced (Davidson, 2017). For example, students who have experienced or are currently experiencing physical neglect may benefit from opportunities to have their physical needs met (e.g., access to a freely available food pantry). Students who have experienced emotional abuse may benefit from increased accessibility to professors (e.g., access to faculty cell phone numbers or additional office hours). Understanding types of trauma experiences can support tailoring trauma-informed pedagogical practices selected to meet the needs of students (Ellison et al., 2012). Second, a commonly recommended trauma-informed pedagogical practice includes varying the material covered in class so that potentially “triggering” content is delivered adjacent to content that is less likely to be triggering (VanderKaay et al., 2023). Being aware of the more common types of traumas experienced could allow for this strategic pedagogical planning. Finally, although there is some debate in the literature regarding the use of “trigger warnings” (Bedera, 2021; George & Hovey, 2019; MacLaren, 2024; and addressing the debate is outside of the scope of this paper), being aware of types of traumas experienced could inform thoughtful decision-making regarding the tailored use of trigger-warnings for some content in OT curricula.

One of the notable findings by Wells et al. (2021) was that OT students reported being reluctant to disclose their individual experience(s) of trauma and the effect on learning. Reasons for reluctance to disclose included fear of stigmatization, fear of not being

perceived as professional, and fear of being pitied. Considering this finding by Wells et al. (2021) together with findings from our study including the potential for under-reporting of trauma and considering the experience of mass trauma secondary to COVID-19, the authors suggest that OT educators consider implementing trauma-informed pedagogical practices universally (i.e., whole class or whole program level). Some examples of trauma-informed pedagogical practices that can be implemented universally include disseminating and discussing resources for student support services to all students (e.g., in course syllabus or on course website home page) rather than only those students who disclose trauma (instructor/interactions), building flexibility into deadlines for all students by allowing all students a certain number of non-penalized late days (academic/pedagogical), and providing training to all faculty and staff regarding trauma-informed pedagogy (systems/policy/school-wide). Implementing trauma-informed practices universally is philosophically consistent with other pedagogical approaches focused on promoting accessibility and inclusivity including both the *Inclusive Pedagogy* framework and the *Universal Design for Learning* framework. *Inclusive Pedagogy* involves approaching teaching and learning in a way that increases accessibility of learning for all students and creates welcoming learning spaces (Sanger, 2020). Universal Design for Learning is a framework aimed at integrating broad structural and systemic changes to create learning environments that are accessible, equitable, and inclusive for all learners irrespective of student-specific needs (Basham et al., 2020). Implementing trauma-informed pedagogical practices universally could similarly increase accessibility, equitability, and inclusivity among all students including identified trauma survivors and students with undisclosed or under-reported trauma and could also address the impact of mass trauma from COVID-19.

When considering the implementation of trauma-informed pedagogical practices, it is important to recognize that there are many contextual factors that could influence the experience of trauma (Banford Witting, 2018). While mass trauma, such as that associated with the global COVID-19 pandemic, was felt worldwide (Anzaldúa, 2022), other factors may be unique to individual contexts (e.g., national, or local contexts). For example, in the Canadian context, there are distinct health care and social policies that could have impacted students differently throughout the COVID-19 pandemic when compared to other global contexts (Combden et al., 2022). Rates of social distancing and stay-at-home orders varied, highlighting the implications of unique health care systems (Combden et al., 2022). The Black Lives Matter demonstrations in 2020 were experienced differently in Canada than in the USA (Potvin, 2020) and likely other parts of the world. On a global scale, contextual factors such as natural disasters, technological disasters, wars, organized violence, and systematic institutional racism could contribute to the experience of trauma (Banford Witting, 2018). Context influences the experiences of trauma which may influence trauma prevalence. Therefore, additional research in unique global contexts would contribute to the body of literature regarding the prevalence and impact of trauma on OT education worldwide.

A limitation to the present study is that no demographic or personal information, including any equity-seeking status, was collected from participants. Although this protected participant anonymity, thereby potentially increasing participation, it ultimately

limited the degree of statistical analysis possible. Responses may have been impacted because students remained in the classroom to complete the CTQ (e.g., responding differently due to potential risk of other students viewing responses or potential fear of an emotional reaction to questions regarding trauma). Allowing the students to take the survey away in an envelope to complete (potentially in a more comfortable and discreet location) and return the survey in the envelope to a confidential drop-box may have mitigated this limitation. Finally, the CTQ does not directly account for recent experiences of trauma or re-traumatization.

Conclusion

This manuscript reports on the finding of a prevalence study of childhood trauma experiences among two cohorts of students enrolled in a MSc OT program. This research builds on work previously published in this journal and extends knowledge by utilizing the CTQ, reporting types of traumas experienced, and exploring a different context (i.e., MSc OT students in one Canadian program). Findings suggest a low prevalence of trauma overall with the highest level of trauma reported as emotional abuse (low to moderate classification). However, potential under-reporting was also noted. Implementing trauma-informed pedagogical practices at a universal level may be beneficial for all students, especially when knowledge of the types of traumas experienced are used to inform the thoughtful selection of practices to be implemented.

Our program of research currently includes an implementation study where trauma-informed pedagogical practices were explicitly implemented universally in one course in the MSc OT program and student experiences of the trauma-informed practices were explored via focus groups. The program of research has also been expanded to include implementation studies in other programs in the institution's School of Rehabilitation Science. Additional prevalence research in other global contexts is recommended to expand the body of literature regarding trauma in OT education worldwide. Finally, research exploring the impact of trauma-informed pedagogical practices on learning outcomes in OT would also represent an important contribution to evidence-based occupational therapy education.

References

American Psychological Association. (2015). *APA dictionary of psychology*. American Psychological Association.

Anzaldúa, J. M. (2022). Internationalizing trauma-informed perspectives to address student trauma in post-pandemic higher education. In R. Ammigan, R. Y. Chan, & K. Bista (Eds.), *COVID-19 and higher education in the global context: Exploring contemporary issues and challenges* (pp. 154-171). STAR Scholars. https://starscholars.org/product/covid-19-and-higed/

Baker, A. J. L., & Maiorino, E. (2010). Assessments of emotional abuse and neglect with the CTQ: Issues and estimates. *Children and Youth Services Review*, *32*(5), 740–748. https://doi.org/10.1016/j.childyouth.2010.01.011

Banford Witting, A. (2018). Introduction to the special issue on systemic approaches to mass trauma. *Contemporary Family Therapy*, *40*(3), 223–225. https://doi.org/10.1007/s10591-018-9476-8

Barros-Lane, L., Smith, D. S., McCarty, D., Perez, S., & Sirrianni, L. (2021). Assessing a trauma-informed approach to the COVID-19 pandemic in higher education: A mixed methods study. *Journal of Social Work Education*, *57*(sup 1), 66-81. https://doi.org/10.1080/10437797.2021.1939825

Basham, J. D., Blackorby, J., & Marino, M. T. (2020). Opportunity in crisis: The role of universal design for learning in educational redesign. *Learning Disabilities: A Contemporary Journal*, *18*(1), 71–91.

Bedera, N. (2021). Beyond trigger warnings: A survivor-centred approach to teaching on sexual violence and avoiding institutional betrayal. *Teaching Sociology, 49*(3) 267-277. https://journals.sagepub.com/doi/10.1177/0092055X211022471

Bernstein, D.P., & Fink, L. (1998). *Childhood Trauma Questionnaire*. NCS Pearson, Inc. https://www.pearsonclinical.ca/store/caassessments/en/Store/Professional-Assessments/Personality-%26-Biopsychosocial/Brief/Childhood-Trauma-Questionnaire%3A-A-Retrospective-Self-Report/p/P100008101.html

Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., Stokes, J., Handelsman, L., Medrano, M., Desmond, D., & Zule, W. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect*, *27*(2), 169–190. https://doi.org/10.1016/S0145-2134(02)00541-0

Bryce, I., Pye, D., Beccaria, G., McIlveen, P., & Du Preez, J. (2023). A systematic literature review of the career choice of helping professionals who have experienced cumulative harm as a result of adverse childhood experiences. *Trauma, Violence, & Abuse*, *24*(1), 72–85. https://doi.org/10.1177/15248380211016016

Bussières, A., Hancock, M. J., Elklit, A., Ferreira, M. L., Ferreira, P. H., Stone, L. S., Wideman, T. H., Boruff, J. T., Al Zoubi, F., Chaudhry, F., Tolentino, R., & Hartvigsen, J. (2023). Adverse childhood experience is associated with an increased risk of reporting chronic pain in adulthood: A systematic review and meta-analysis. *European Journal of Psychotraumatology*, *14*(2). https://doi.org/10.1080/20008066.2023.2284025

Cantiller, D. (2021). Trauma, healing and learning in the Canadian postsecondary insitution. *Medium*. https://dancanthinks.medium.com/trauma-healing-and-learning-in-the-canadian-postsecondary-institution-2c5a717032a9

Church, C., Andreassen, O. A., Lorentzen, S., Melle, I., & Aas, M. (2017). Childhood trauma and minimization/denial in people with and without a severe mental disorder. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.01276

Clark, C. S., & Aboueissa, A. E. M. (2021). Nursing students' adverse childhood experience scores: A national survey. *International Journal of Nursing Education Scholarship*, *18*(1). https://doi.org/10.1515/ijnes-2021-0013

Combden, S., Forward, A., & Sarkar, A. (2022). COVID-19 pandemic responses of Canada and United States in first 6 months: A comparative analysis. *International Journal of Health Planning and Management*, *37*(1), 50–65. https://doi.org/10.1002/hpm.3323

Davidson, S. (2017). *Trauma-informed practices for postsecondary education: A guide*. Education Northwest. https://educationnorthwest.org/sites/default/files/resources/trauma-informed-practices-postsecondary-508.pdf

Elliott, D. E., Bjelajac, P., Fallot, R. D., Markoff, L. S., & Reed, B. G. (2005). Trauma-informed or trauma-denied: Principles and implementation of trauma-informed services for women. *Journal of Community Psychology*, *33*(4), 461-477. https://doi.org/10.1002/jcop.20063

Ellison, M. L., Mueller, L., Smelson, D., Corrigan, P. W., Torres Stone, R. A., Bokhour, B. G., Najavits, L. M., Vessella, J. M., & Drebing, C. (2012). Supporting the education goals of post-9/11 veterans with self-reported PTSD symptoms: A needs assessment. *Psychiatric Rehabilitation Journal*, *35*(3), 209–217. https://doi.org/10.2975/35.3.2012.209.217

Frazier, P., Anders, S., Perera, S., Tomich, P., Tennen, H., Park, C., & Tashiro, T. (2009). Traumatic events among undergraduate students: Prevalence and associated symptoms. *Journal of Counseling Psychology*, *56*(3), 450-460. https://doi.org/10.1037/a0016412

Gaywsh, R., & Mordoch, E. (2018). Situating intergenerational trauma in the educational journey. *IN Education*, *24*(2). https://doi.org/10.37119/ojs2018.v24i2.386

George, E., & Hovey, A. (2019). Deciphering the trigger warning debate: A qualitative analysis of online comments. *Teaching in Higher Education, 25*(7), 825-841. https://doi.org/10.1080/13562517.2019.1603142

Georgieva, S., Tomas, J. M., & Navarro-Pérez, J. J. (2021). Systematic review and critical appraisal of Childhood Trauma Questionnaire—Short Form (CTQ-SF). *Child Abuse & Neglect*, *120*. https://doi.org/10.1016/j.chiabu.2021.105223

Government of Canada. (2023). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*. Chapter 3: The Consent Process. https://ethics.gc.ca/eng/tcps2-eptc2_2022_chapter3-chapitre3.html

Hedrick, J., Bennett, V., Carpenter, J., Dercher, L., Grandstaff, D., Gosch, K., Grier, L., Meek, V., Poskin, M., Shotton, E., & Waterman, J. (2021). A descriptive study of adverse childhood experiences and depression, anxiety, and stress among undergraduate nursing students. *Journal of Professional Nursing*, *37*(2), 291–297. https://doi.org/10.1016/j.profnurs.2021.01.007

Herzog, J. I., & Schmahl, C. (2018). Adverse childhood experiences and the consequences on neurobiological, psychosocial, and somatic conditions across the lifespan. *Frontiers in Psychiatry*, *9*, 420. https://doi.org/10.3389/fpsyt.2018.00420

Hulley, S.B., Newman, T.B., & Cummings, S.R. (2013). Getting started: The anatomy and physiology of clinical research. In S.B. Hulley, S.R. Cummings, W.S. Browner, D.G. Grady, & T.B. Newman (Eds.), *Designing clinical research* (4th ed., pp. 2-13). Wolters Kluwer.

Iverson, K. M., Dick, A., McLaughlin, K. A., Smith, B. N., Bell, M. E., Gerber, M. R., Cook, N., & Mitchell, K. S. (2013). Exposure to interpersonal violence and its associations with psychiatric morbidity in a U.S. national sample: A gender comparison. *Psychology of Violence*, *3*(3), 273–287. https://doi.org/10.1037/a0030956

Joncas, J. A., & Pilote, A. (2021). The role of guidance professionals in enhancing the capabilities of marginalized students: The case of Indigenous women in Canada. *International Journal for Educational and Vocational Guidance*, *21*(2), 405-427. https://doi.org/10.1007/s10775-021-09474-3

Jung, C. G. (1966). Fundamental questions of psychotherapy. In R. Hull (Ed.), *Volume 16: Practice of Psychotherapy* (pp. 111-126). Princeton: Princeton University Press. https://doi.org/10.1515/9781400851003.111

King, E., Steenson, C., Shannon, C., & Mulholland, C. (2017). Prevalence rates of childhood trauma in medical students: A systematic review. *BMC Medical Education*, *17*(1), 159. https://doi.org/10.1186/s12909-017-0992-2

Kostouros, P. (2010). The dance of trauma in a post-secondary education. *Transformative Dialogues: Teaching & Learning Journal*, *4*(2). https://www.kpu.ca/sites/default/files/Teaching%20and%20Learning/TD.4.2.9_Kostouros_Dance_of_Trauma.pdf

MacLaren, G. (2024). Defining dignity in higher education as an alternative to requiring 'Trigger Warnings'. *Nursing Philosophy*, *25*, e12474. https://doi.org/10.1111/nup.12474

Mirzaei, A., Carter, S. R., Patanwala, A. E., & Schneider, C. R. (2022). Missing data in surveys: Key concepts, approaches, and applications. *Research in Social and Administrative Pharmacy*, *18*(2), 2308–2316. https://doi.org/10.1016/j.sapharm.2021.03.009

Mooney, M. (2017). Recognizing, treating, and preventing trauma in LGBTQ youth. *Journal of Family Strengths*, *17*(2). https://digitalcommons.library.tmc.edu/jfs/vol17/iss2/16

Newcomb, M., Burton, J., Edwards, N., & Hazelwood, Z. (2015). How Jung's concept of the wounded healer can guide learning and teaching in social work and human services. *Advances in Social Work and Welfare Education*, *17*(2), 55-69.

Panofsky, S., Buchanan, M., John, R., & Goodwill, A. (2021). Indigenous trauma intervention research in Canada: A narrative literature review. *The International Indigenous Policy Journal*, *12*(2). https://doi.org/10.18584/iipj.2021.12.2.10936

Papp, V., & Fitzgerald, M. (2024). Childhood abuse and chronic physical health conditions in adulthood: A longitudinal analysis of familial support and strain as mediators. *Contemporary Family Therapy*, *46*(2), 162–172. https://doi.org/10.1007/s10591-023-09682-9

Potvin, L. (2020). "Black lives matter": It's also true in Canada! *Canadian Journal of Public Health, 111*(5), 633–635. https://doi.org/10.17269/s41997-020-00414-2

Saini, S. M., Hoffmann, C. R., Pantelis, C., Everall, I. P., & Bousman, C. A. (2019). Systematic review and critical appraisal of child abuse measurement instruments. *Psychiatry Research*, *272*, 106–113. https://doi.org/10.1016/j.psychres.2018.12.068

Sanger, C.S. (2020). Inclusive Pedagogy and Universal Design approaches for diverse learning enviornments. In C. Shea Sanger & N.W. Gleason (Eds.), *Diversity and inclusion in global higher education* (pp. 31-71). Palgrave MacMillan. https://doi.org/10.1007/978-981-15-1628-3_2

Sitler, H. C. (2009). Teaching with awareness: The hidden effects of trauma on learning. *The Clearing House, 82*(3), 119-124. https://doi.org/10.3200/tchs.82.3.119-124

Thomas, J. T. (2016). Adverse childhood experiences among MSW students. *Journal of Teaching in Social Work*, *36*(3), 235-255. https://doi.org/10.1080/08841233.2016.1182609

Söyünmez, S., & Seki Öz, H. (2024). Childhood traumatic experiences and happiness of nursing students: A mixed methods study. *Child Maltreatment*, *29*(2), 322–339. https://doi.org/10.1177/10775595221143530

Toronto, C. E., & Remington, R. (2020). *A step-by-step guide to conducting an integrative review*. Springer. https://doi.org/10.1007/978-3-030-37504-1

Taylor, K., Coulombe, S., Coleman, T. A., Cameron, R., Davis, C., Wilson, C. L., Woodford, M. R., & Travers, R. (2020). Social support, discrimination, and self-esteem in LGBTQ + high school and post-secondary students. *Journal of LGBT Youth*, 1-25. https://doi.org/10.1080/19361653.2020.1812465

VanderKaay, S., Begin, D., Lisogurski, R., Robb, C., Pheonix, M., & Vrkljan, B. (2023). Trauma-informed pedagogical practices in post-secondary education: An integrative review of the literature [Manuscript submitted for publication]. *School of Rehabilitation Science, McMaster University.*

Watt, T. T., Hartfield, K., Kim, S., & Ceballos, N. (2023). Adverse childhood experiences contribute to race/ethnic differences in post-secondary academic performance among college students. *Journal of American College Health*, *71*(6), 1845-1853. https://doi.org/10.1080/07448481.2021.1947838

Wells, E., Adams, B., & Wheeler, L. G. (2021). The impact of trauma on graduate occupational therapy students: Trauma-informed implications for educators. *Journal of Occupational Therapy Education*, *5*(4). https://doi.org/10.26681/jote.2021.050403

Yasmine, R., & Moughalian, C. (2016). Systemic violence against Syrian refugee women and the myth of effective intrapersonal interventions. *Reproductive Health Matters*, *24*(47), 27-35. https://doi.org/10.1016/j.rhm.2016.04.008